DOCUMENT RESUME

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TITLE IEA Six-Subject Survey Instruments: Science Student Questionnaires.

INSTITUTION International Association for the Evaluation of Educational Achievement, Stockholm (Sweden).

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IDENTIFIERS *International Evaluation Educational Achievement

ABSTRACT

In 1965 the International Association for the Evaluation of Educational Achievement (IEA) inaugurated a cross-national survey of achievement in six subjects: Science, Reading Comprehension, Literature, English as a Foreign Language, French as a Foreign Language, and Civic Education. The overall aim of the project was to use international tests in order to relate student achievement and attitudes to instructional, social, and economic factors, and from the results to establish generalizations of value to policy makers worldwide. Contained here are three Science Questionnaires surveying the following information for the following student populations: Science Questionnaire measuring background in Science (populations II and IV); and two Science Attitude and Descriptive Scales measuring the part Science plays in the students' lives (populations I,II,IV). Population I consists of students aged 10 to 11 years; population II, 14 to 15 years; and population IV, students enrolled in the final year of pre-university training. Answer keys and statistical data can be found in ED 081 639. (RC)

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The basic procedures to be followed in the main testing of the IEA Six-Subject Survey were set out in a series of manuals:

| | | |
|---|---|---|
| Stage 2 | IEA/M1 | Manual for National Centers |
| | IEA/M2 | Manual for School Coordinators |
| | IEA/M3 | Manual for Test Administrators |
| Stage 3 | IEA/M1/Stage 3 | Manual for National Centers |
| | IEA/M2/Stage 3 | Manual for School Coordinators |
| | IEA/M3/Stage 3 | Manual for Test Administrators |

These manuals are available from ERIC Clearinghouse.

The following extracts from these manuals have been appended to this particular IEA instrument to provide researchers with the minimum necessary test instruction information (e.g., such things as the instructions on the practice items and the warnings concerning the amount of time left for the test have been omitted here). For full details, please consult the appropriate manuals.

The Data Bank Instrument Number which appears below is a new number, assigned since the instruments were administered for the purpose of easily linking items in the instruments with the resultant variables in the Data Bank holdings. Each such variable is named in the codebook using the new instrument number and (usually) the number of the item within the instrument from which the variable is derived. The key to the new instrument numbers is as follows:

1: Type of Instrument

E = Examination (student)
Q = Questionnaire (student)
T = Teacher questionnaire
S = School questionnaire

2: Student Population

| | |
|---|---|
| 1 = I | 6 = II and IV |
| 2 = II | 7 = I, II and IV |
| 3 = III | 8 = I and IV |
| 4 = IV | S = IV Specialist |
| 5 = I and II | N = NA: Teacher or School questionnaire |

3: Subject

S = Science
R = Reading Comprehension
L = Literature
M = Mother Tongue (Reading Comprehension and Literature)
E = English as a Foreign Language
F = French as a Foreign Language
C = Civic Education
2 = All Stage 2 Subjects
3 = All Stage 3 Subjects
5 = All Stage 2 and Stage 3 Subjects

4-5: Instrument Within Type

One or two characters used when necessary to uniquely identify each instrument when there is more than one instrument of the same type.

Instrument Name Science Questionnaire

Data Bank Instrument Number QS5S

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[illegible]

Biology, Chemistry, Physics, General Science (S.C. to include), Geology, Astronomy.

1. Are you currently taking any of the above Science subjects?

   A. Yes

   If not, when did you last study one?

   B. Last year

   C. 2 years ago

   D. 3 or more years ago

   E. Have never taken any Science subject

2. How important has a knowledge of Mathematics been to you in studying Science (physics most)?

   A. It has been very important; I could not have learned Science without it.

   B. It has been important, but I could have learned Science without it.

   C. It has not been important, but it has helped me in occasions.

   D. It has been of no importance; I have not applied it to learn Science.

   E. I have never studied a Science subject.

[illegible]

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12. Wherever coding or punching schemes are being used in the coding of responses, minimum and maximum values for each variable are set forth in the interrational coding scheme. Where a student indicates a response which is greater than the maximum value, it is to be coded as the maximum value. Thus, if the maximum value for a certain variable is 25, a response of 30 would be coded as 25, since 25 means 25 or more.

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Instrument Name The Place of Science in the School and in the World Outside

Data Bank Instrument Number Q6SK

IEA/M3

Pop II, p. 7

Pop IV, p. 8

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"We are now ready to start Section K. In this section you will mark your answers to the questions in the appropriate place in Section K on the answer card."

Point out Section K on the answer card.

"You will have about 15 minutes to answer the questions in this section. Read the directions on the first page of Section K. When you have finished, turn over the page and begin."

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# THE PLACE OF SCIENCE IN

# THE SCHOOL

# AND IN THE WORLD OUTSIDE

These questions are being given to a number of children in several countries to find out what they think about Science and the part it plays in their lives. For most of the questions there are no right or wrong answers, so this is NOT a test. We just want to know what you think.

Mark your answer by blacking in the appropriate space in Section E of your answer card. If you want to change an answer, be sure to erase the old mark completely.

For each of these four questions, select the best answer, and indicate it by marking the appropriate space on your answer card.

1. The marks I get in Science are usually .....

   A. better than in most other subjects.
   B. about average compared with other subjects.
   C. worse than in most other subjects.

2. I like Science .....

   A. more than most other subjects.
   B. about the same as other subjects.
   C. less than most other subjects.

3. I would like to study Science after the end of this school year.

   A. Yes.
   B. Not sure.
   C. No.

4. I hope that in my career I will be able to make use of some of the Science I learned at school.

   A. Yes.
   B. Not sure.
   C. No.

Below is a list of things you might do outside school. Look at each one and if it is something you do very often or used to do very often, mark A. If you have ever done it at all, mark B. If you have never done it, mark C.

5. Visit a Science museum.

   A. Often.
   B. Sometimes.
   C. Never.

6. Go to meetings of a scientific club.

   A. Often.
   B. Sometimes.
   C. Never.

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7. Build working models of ships, cars or aeroplanes.

A. Often.
B. Sometimes.
C. Never.

8. Build a radio set or other piece of electronic apparatus.

A. Often.
B. Sometimes.
C. Never.

9. Visit an airfield to watch the planes.

A. Often.
B. Sometimes.
C. Never.

10. Visit a harbour to watch the ships.

A. Often.
B. Sometimes.
C. Never.

11. Read a science fiction book.

A. Often.
B. Sometimes.
C. Never.

12. Look at the moon or the planets through a telescope.

A. Often.
B. Sometimes.
C. Never.

13. Do chemistry experiments with your own equipment.

A. Often.
B. Sometimes.
C. Never.

Below is a list of some things you may do. If you do, mark it. If you do not but would like to, mark it. If you are not interested in doing it, mark it.

14. Take a hobby of studying or collecting figurines or I ceramics.

I do it.
I would like to.
I am not interested.

15. Make a hobby of studying or collecting ceramics.

I do it.
I would like to.
I am not interested.

16. Take a hobby of studying or collecting stamps or furniture.

I do it.
I would like to.
I am not interested.

For each of the following statements, please decide whether it is true or false with you, and then indicate this by checking the appropriate letter. If you definitely agree, mark it. If you do, mark it. If you are [illegible] mark it. If you disagree, mark it. If you definitely disagree, mark it.

17. I like reading about Science.

[illegible]
Agree.
[illegible]
[illegible]
[illegible]

18. Science is steadily destroying the world.

I strongly agree.
I agree.
I am uncertain.
I disagree.
I strongly disagree.

[illegible]

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Item 31 This question may be reworded to include forms of written source material other than the Science text book.

Item 32 "We have" could translated as "We use".

Item 33 If this item seems inappropriate to the local conditions, it may be replaced by a statement which implies that the Science homework is devoted to Science related activities separate from learning material in the text book or solving problems taken therefrom.

Item 34 We are interested here in the allocation of time between the two modes of activity to the extent that they can be distinguished.

Item 35 Note that this item has been revised. The new form is given in the errata section of the yellow bulletin.

Item 37 "outside school" can include both outside regular school hours and outside the school classroom. It covers all extra-mural or extra-curricular scientific activities.

Item 39 In those countries using the English language, we suggest that the word "using" be replaced by "the use of".

Item 40 This item differs from item 30 in that it does not imply necessarily that a laboratory is available.

NOTE: The test administrators should decide whether questions 41 - 48 are appropriate or not for the whole class and an appropriate instruction to this effect should be included in the instructions to test administrators (that is, Manual 3).

Item 45 This item implies that the students do carry out the experiments after they have been demonstrated, and this point must be made clear.

Item 47 The intent of this item is to discover if while allowing the students considerable freedom the teacher helps to structure the situation by posing questions which are intended to help the student direct his activities.

Item 48 This question is different from question 42 in that it suggests not merely a written outline of the experimental work is provided, but detailed instructions covering every piece of student behaviour.

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Instrument Name The Place of Science in the School and in the World Outside

Data Bank Instrument Number Q1SK

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"We are now ready to start Section K, which is the next section in your booklet. The answers to this section are to be marked in part K on the other side of your answer card."

Indicate part K of the answer card.

"Follow the directions on the first page of section K as I read them to you. These questions are being given to a number of children in several countries to find out what they think about science and the part it plays in their lives. For most of the questions there are no right or wrong answers so this is not a test. We just want to know what you think. When you are told to do so, work through the questions, indicating the answers you want to give. The answers should be put in Section K on your answer card. Now turn the page to the first set of questions and begin."

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[illegible]

[illegible]

[illegible]

These questions are being given to a number of children in several countries to find out what they think about Science and the part it plays in their lives. For most of the questions there are no right or wrong answers, so this is NOT a test. We just want to know what you think.

The answers to these questions should be put in Section K on your answer card. Blacken in the oval which contains the letter of the answer you choose for each question. If you wish to change an answer you may, but be sure to erase the mark for the old answer completely.

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For each of these four questions, select the best answer, and indicate it by marking the appropriate letter.

1. The marks I get in Science are usually .....

   A. better than in most other subjects.
   B. about average compared with other subjects.
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3. I would like to study Science after the end of this school year.

   A. Yes.
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4. I hope that in my career I will be able to make use of some of the Science I learned at school.

   A. Yes.
   B. Not sure.
   C. No.

Below is a list of things you might do outside school. Look at each one and if it is something you do very often or want to do very often, mark A. If you have ever done it at all, mark B. If you have never done it, mark C.

5. Visit a Science website.

   A. Often.
   B. Sometimes.
   C. Never.

6. Go to meetings of a scientific club.

   A. Often.
   B. Sometimes.
   C. Never.

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7. Build working article of ships, make or corrections.

   A. often.
   B. sometimes.
   C. never.

8. Build a radio set or other piece of electronic equipment.

   A. often.
   B. sometimes.
   C. never.

9. Visit an airfield to watch the planes.

   A. often.
   B. sometimes.
   C. never.

10. Visit a harbour to watch the ships.

    A. often.
    B. sometimes.
    C. never.

11. Read a science fiction book.

    A. often.
    B. sometimes.
    C. never.

12. Look at the moon or the planets through a telescope.

    A. often.
    B. sometimes.
    C. never.

13. Do Chemistry experiments with your own equipment.

    A. often.
    B. sometimes.
    C. never.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]